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U.S. DEPARTMENT OF AGRICULTURE

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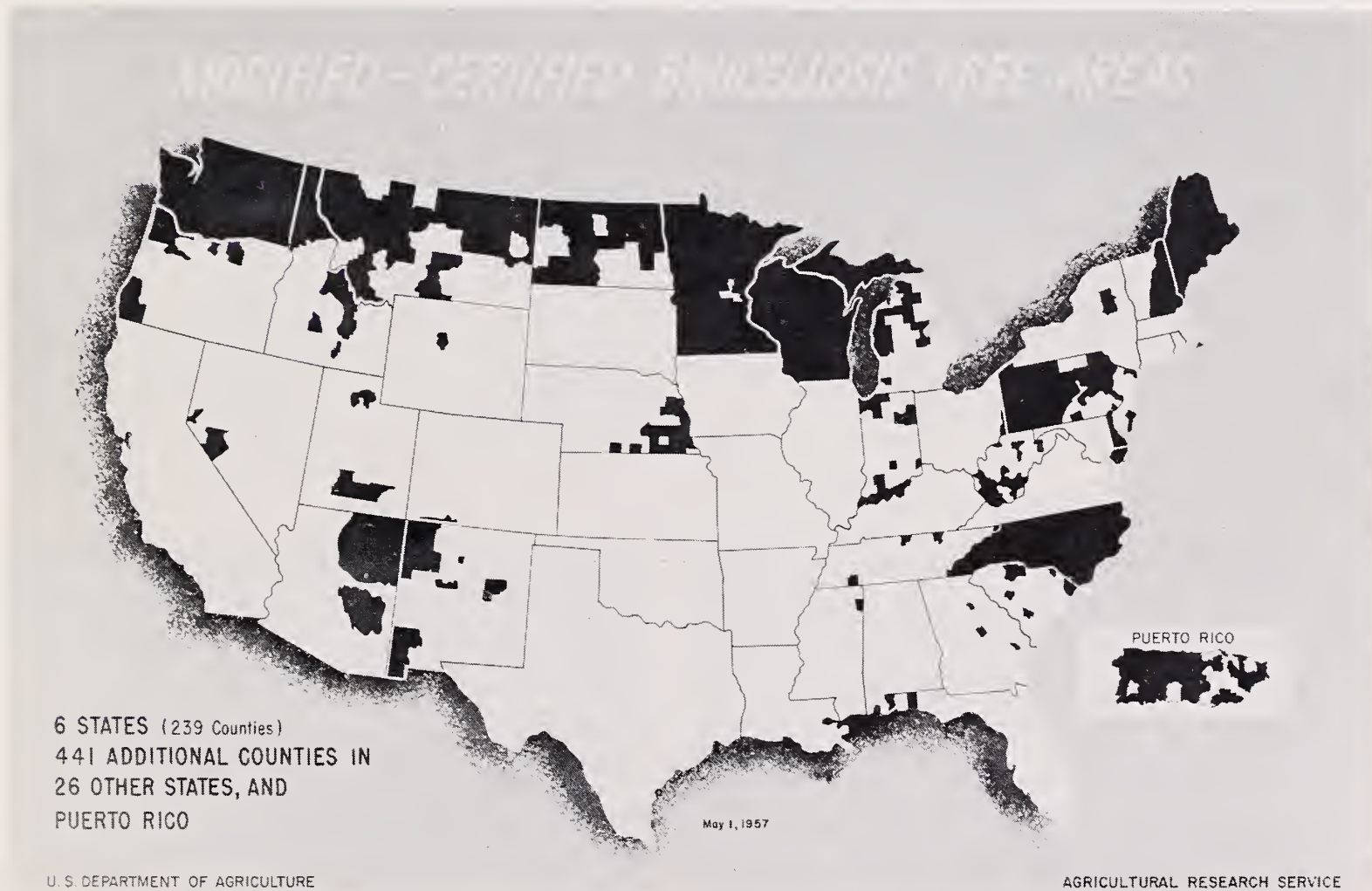
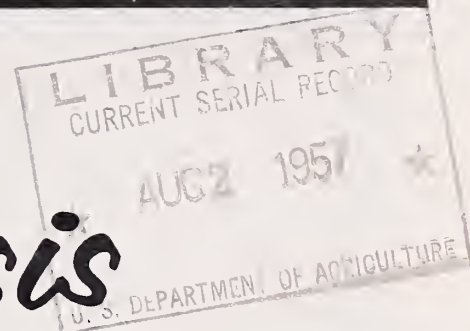
Picture Story No. 105

June, 1957



THE BATTLE AGAINST

Brucellosis



Another round has been won in the battle to wipe out brucellosis among our Nation's cattle. Since 1954, when the U. S. Department of Agriculture and the States began an all-out eradication program, incidence of this contagious disease has been reduced from 2.6 to less than 2 percent of our cattle. In 1935, when eradication measures were first begun on a national scale, 11.5 percent of U. S. cattle had the disease.

Six States--Maine, New Hampshire, North Carolina,

Washington, Wisconsin, and Delaware--now have less than 1 percent of infected cattle, thus achieving the status of "modified certified brucellosis-free." As of May 1 a total of 441 counties in 26 other States and Puerto Rico have also earned this certification, an important milestone in the eradication of the disease.

But despite this progress, brucellosis (also known as Bang's disease or infectious abortion) still accounts for losses of about \$50 million per year in



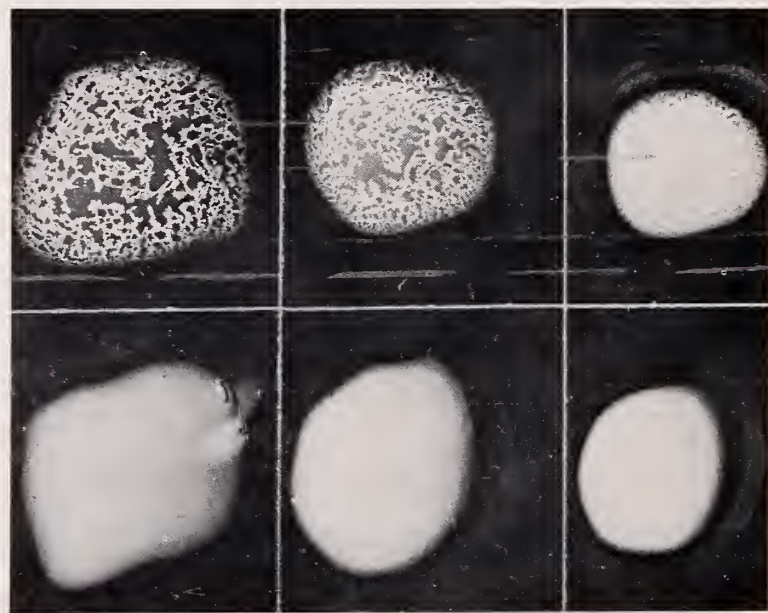
N-14089--Milk ring test samples to detect brucellosis-infected herds are collected at a central dairy. The milk is dipped from each can. Samples from 5 to 12 cows are pooled in one vial, recorded as to source, and sent to a field or central laboratory for analysis.



N-14090 --Blood testing is still the most practical method of diagnosing brucellosis in individual animals. Blood samples drawn by a veterinarian from each animal in a suspected herd are sent to State-Federal laboratories. Standardized materials and methods developed by Agricultural Research Service veterinarians aid in the accuracy of both the milk and the blood tests.



Bn-1160--Blue cream ring above white milk at right is an indication of Brucella infection in the herd. Normal cream ring at left shows negative reaction. Intermediate variations in the two center tubes indicate different degrees of infection. Animals in ring suspicious herds should be blood tested promptly.



N-14095--Here is what the end result of a blood-agglutination test by the rapid plate method looks like. The mottled drops in the upper squares show various degrees of reaction to the test for brucellosis. The unmottled milky drops indicate a negative reaction to the disease.



N-14409--Vaccinating calves at proper ages with Strain 19 *Brucella* vaccine provides serviceable resistance to average field exposure to brucellosis. However, vaccinated animals that are heavily exposed to brucellosis may get the disease.



N-20362--Veterinarian using a branding iron marks brucellosis reactors with a large "B" also applies a special ear tag. Such animals should be kept apart from healthy cattle and removed for slaughter as promptly as possible.



N-20366--This Federal inspector at one of the public stockyards checks origin, status, and destination of cattle before permitting further movement. To help strengthen the brucellosis eradication program, stricter Federal control of interstate movement of cattle has been effective since January 1, 1957. Only steers, spayed heifers, and calves under 8 months old are exempt.



N-20358--Trucks and other vehicles in which brucellosis reactors are transported must be thoroughly cleaned and disinfected. Here a truck which has delivered a load of reactors to a public stockyard is being disinfected under the supervision of a Federal inspector.

unborn or stillborn calves, reduced milk output, and cost of replacing infected stock. The disease organism that causes brucellosis is also a hazard to humans, who may get sick with undulant fever from contact with diseased animals or animal products.

Continued and relentless effort by everyone concerned is needed to hold the gains already made against this costly disease and to make further progress. There can be no standing still, if the goal of complete eradication is to be reached.

Brucellosis fighters now have more effective weapons than ever before for doing their job successfully. These are: (1) the BRT or milk and cream ring test; (2) the blood-serum agglutination test; (3) Strain 19 Brucella vaccine for calves; (4) removal of diseased animals; (5) Federal control of interstate movement of cattle.

The milk and cream ring test makes it possible for a few trained men to screen entire areas to detect infected dairy herds. The cost is about one-tenth that of blood testing. Areas where the ring test is being used have made rapid strides toward complete eradication. Ring testing on an area basis is recommended as the initial step in an eradication program.

Blood agglutination tests are still the only reliable means of diagnosing brucellosis in individual animals. However, only those dairy herds that show a positive reaction to the milk ring test (usually less than 20 percent) need to be blood tested.

Use of Strain 19 Brucella vaccine has helped to reduce the incidence of infection in both dairy and range cattle. Vaccination of calves at proper ages provides serviceable resistance to average field exposure to the disease. If heavily exposed, however, vaccinated animals may contract the disease. That is why quarantine and eventual slaughter of infected animals is important.

The newest weapon to strengthen the brucellosis eradication program was made effective January 1, 1957, when interstate movement of cattle came under stricter Federal control. Only steers, spayed heifers, and calves under 8 months old are exempt. The new rules are closely connected with the status of herds, counties, and States in the brucellosis eradication program. They should help to protect areas already designated as "modified-certified brucellosis-free." Violation of the regulations is a Federal offense, so that shippers are advised to obtain complete details from local, State, or Federal livestock sanitary officials.

Eradication of brucellosis from an area reduces livestock losses and facilitates marketing of cattle and milk. It is to the interest of ranchers and dairy-men to work together with State and Federal livestock regulatory officials and other interested agencies to wipe out the disease on an area basis. Then the program can move forward to free counties, entire States, and eventually the Nation from brucellosis.



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